Warfare Analysis and Research Department

Center for Naval Warfare Studies

U.S. Naval War College

Warfare Analysis & Research Department

Helping Explore the Future

MISSION

To provide timely, objective analysis to senior Navy, Joint, and other USG decision makers on major strategic, operational and programmatic issues.

Warfare Analysis and Research Department

Capabilities And Methodology

Key capabilities:

- Help to conceptualize complex issues;
- Help to prioritize competing considerations;
- Enable clients to visualize alternative scenarios;
- Integrate strategic, operational and technical perspectives;
- Conduct focused multidisciplinary analysis;
- Extensive network with diverse communities, including defense, intelligence, policy-making, academia, and the private sector.

Principal methodology: working with experts from diverse communities using expert facilitation and groupware.

GROUPSYSTEMS.COM

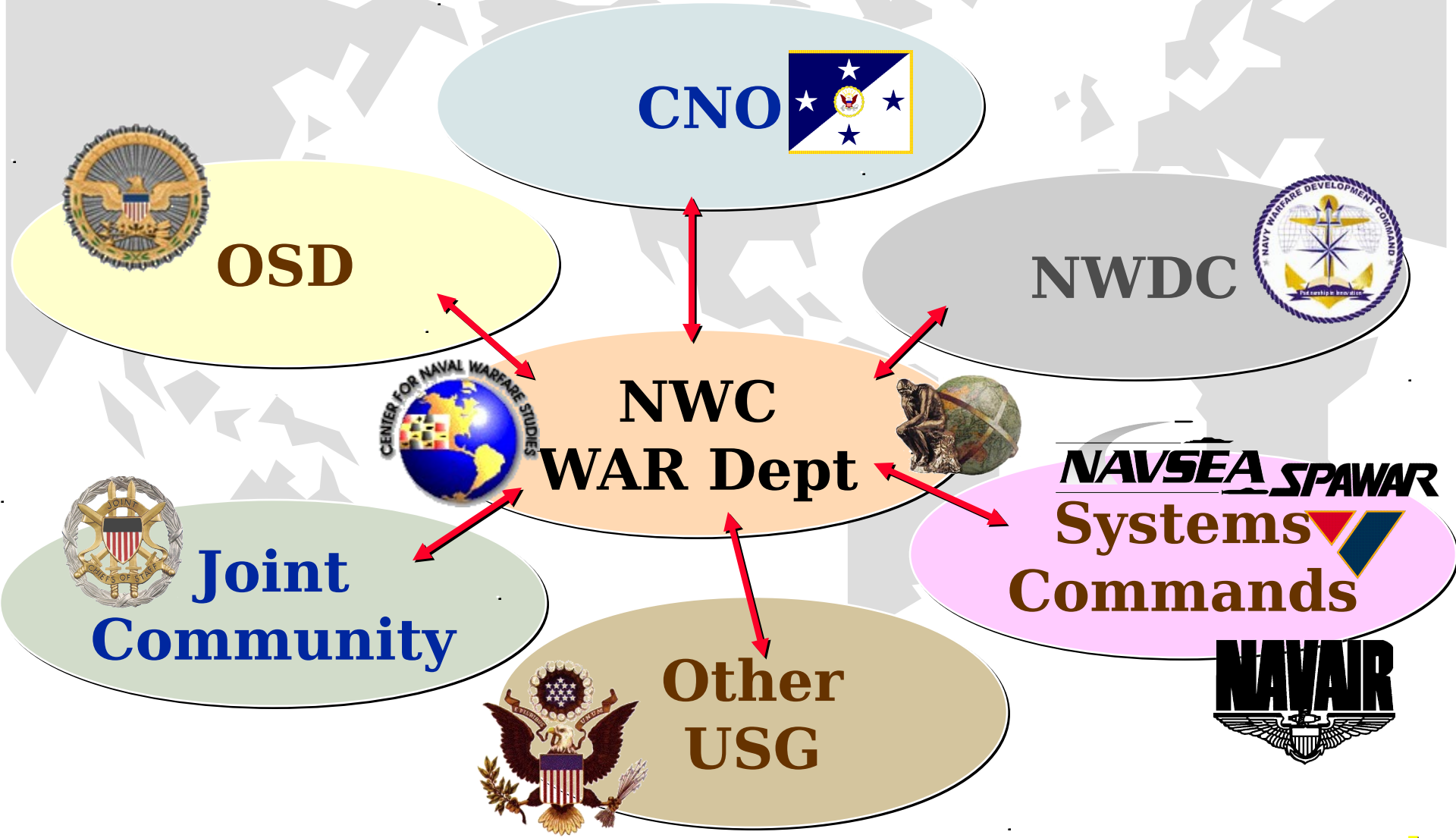
Warfare Analysis and Research Department

Major Research Projects Completed

- LCS Capabilities (N76/NWDC)
- Task Force Sierra (VCNO)
- NewRule.Sets (with Cantor Fitzgerald)
- South Asia Proliferation (CNWS)
- Korea Futures (CINCPAC)
- Targeted Financial Sanctions (with Watson Institute of Brown University)
- MD International Simulation (N71/CNWS/NWDC)
- AEGIS BMD Block 2004 Operational Employment Guidance
- Latin America Futures

Warfare Analysis and Research Department

Principal Relationships

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The Engine of The New Market


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Alternative Finance


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ATHENS HOUSTON SINGAPORE


PA Consulting
Group


Waterpeople, Inc
MORGAN STANLEY


NATIONAL INTELLIGENCE COUNCIL
NIC


National Security Council


MINISTRY OF EXTERNAL AFFAIRS
Government of INDIA


UNITED STATES
JOINT FORCES
COMMAND
USJFCOM


USAID
The US Agency for international Development


USAID


Novib
Lid van
Oxfam
International


DEPARTMENT OF THE NAVY
UNITED STATES OF AMERICA


THE UNITED STATES NAVAL WAR COLLEGE
VIRIBUS MARI VICTORIA


CENTER FOR NAVAL WARFARE STUDIES


United States
Department of Energy
Science, Security and Energy: Powering the 21st Century


Under Secretary of the Navy
The Honorable Jerry MacArthur Hultin


CSIS


Weatherhead Center
for International Affairs


CNA


Center for
Strategic
Studies


CARNEGIE ENDOWMENT
FOR INTERNATIONAL PEACE


CERA
Cambridge Energy Research Associates


COUNCIL ON FOREIGN RELATIONS


COLUMBIA UNIVERSITY
IN THE CITY OF NEW YORK


Vanderbilt University
NASHVILLE, TENNESSEE


THE UNIVERSITY
OF MISSISSIPPI


INSTITUTE FOR
INTERNATIONAL
ECONOMICS

Success in Decision Events

Collaborative research success depends on:

- **Quality of the participants invited**
- **Skillfulness of the facilitator**
- **Capability of the supporting technology**

The Naval War College Decision Support Center (DSC)
A sophisticated research tool

Decision Event

Synchronous Chat r

- See all, know none
- Voting capabilities

Schedule (8 hrs)

- 1/2 discussion
- 1/4 GroupSystems
- 1/4 briefs & breaks

The Challenges of Face-to-Face Meetings

- **Groups get sidetracked**
- **Dominant personalities rule**
- **Ideas are attacked**
- **Fear of reprisal**
- **Important ideas not brought forward**
- **Objectives not reached**
- **Meeting minutes are subjective**
- **Not all information is recorded**

Why Use Groupware?

Technology takes advantage of the collective brainpower of the group AND maximizes the use of its time.

All participants are peers in groupware sessions

GroupSystems.com

The Benefits of Groupware

- **Facilitates collaboration**
  - Participants with different insights can give their input and come to consensus on priorities
- **Anonymous**
  - No way to track who says what
- **Shared, simultaneous input**
  - Larger generation of ideas in less time
- **Public display of ideas**
  - Gives participants opportunity to build on each other's inputs
- **Captures data for later analysis**
  - Ideas and comments are always tied together
- **Multiple tools to use for different processes**
  - Focuses participants in each step

Groupware Tools

Tool Name	Tool Characteristics
Electronic Brainstorming	Used for simultaneous and anonymous idea sharing on a specific question
Categorizer	Used for generating single or multiple lists and classifying comments
Group Outliner	Used to generate and/or organize ideas into familiar hierarchical structure
Topic Commentator	Used to generate a comprehensive accumulation of ideas
Vote	Used to evaluate, make decisions, and/or build consensus

Integrated Tools in the DSC

- Classified and unclassified VTC
- Electronic briefing (sound/animation)
- Live video/television feed/VCR playback
- SIPRNET connection in control room

- Ability to project seven separate presentations simultaneously
- Booths for simultaneous interpretation of two different languages

What is the Cost?

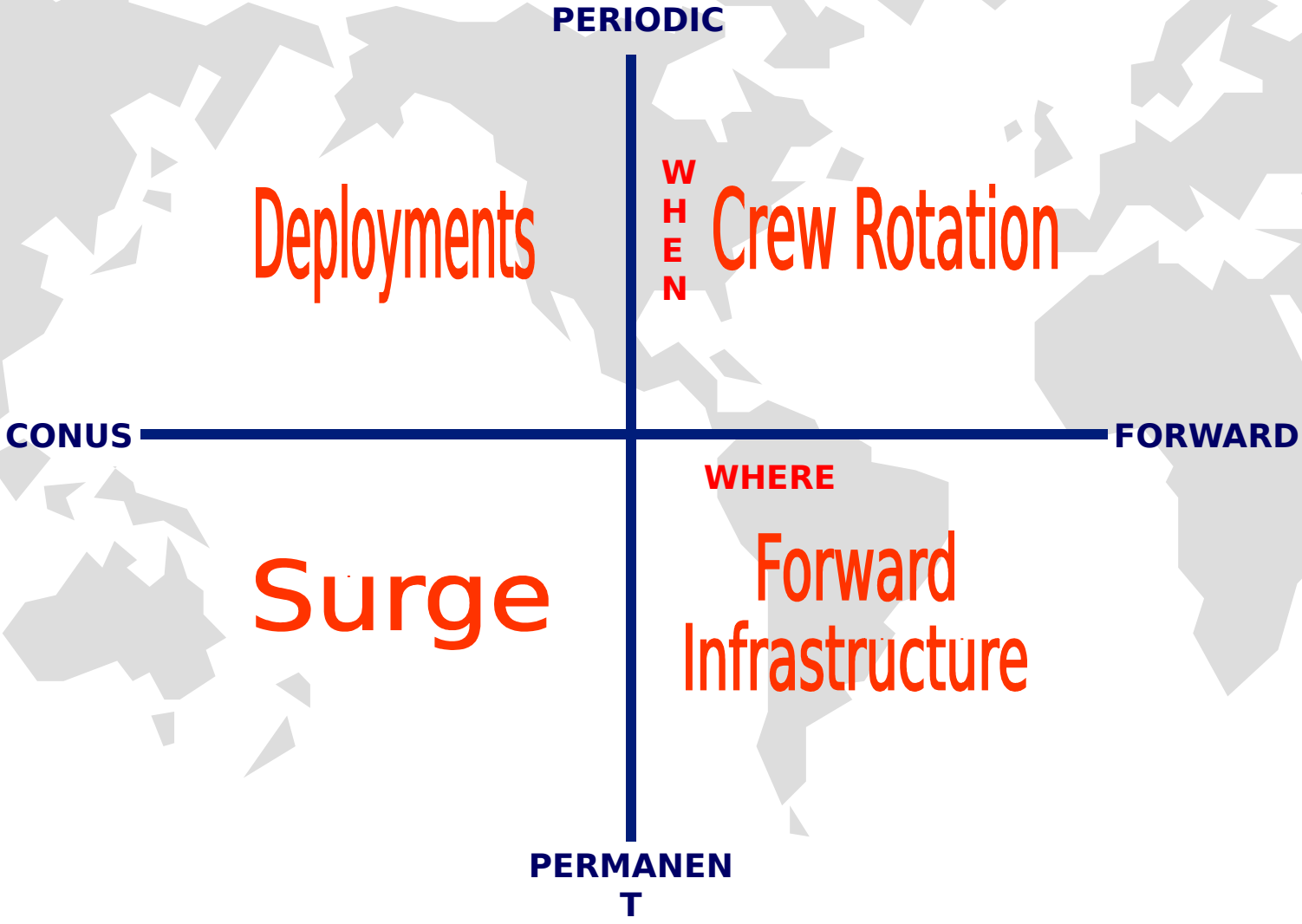
- **No facilitation or equipment costs if Naval War College DSC is used**
  - **Host is responsible for all support arrangements such as ITO, security, food, etc., as well as participant travel/per diem**
  - **WAR Dept can assist with admin set-up**
- **Events off-site**
  - **Two separate 24 user systems**
  - **Pay for shipping costs to and from site to Newport**
  - **Pay ITO for two WAR Dept personnel**
    - **Extra day before and after for set-up and take-down**

Facilitation Tools for Collaborative Research

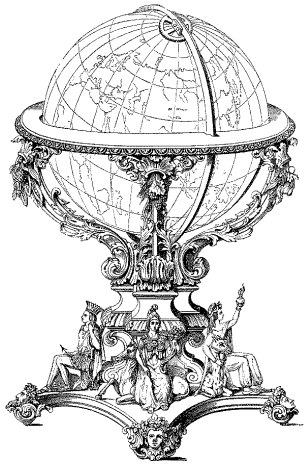
- Scenario-based Analysis
- Scenario Dynamics Grid
- Alternative Futures Matrix
- Consolidation Exercises
- Prioritization Exercises
- Forced Analogy
- Problem Reversal
- “Elevator” Drill

Just a few examples

Deployment Matrix



Kenneth Waltz: Man, the State and War (1954)



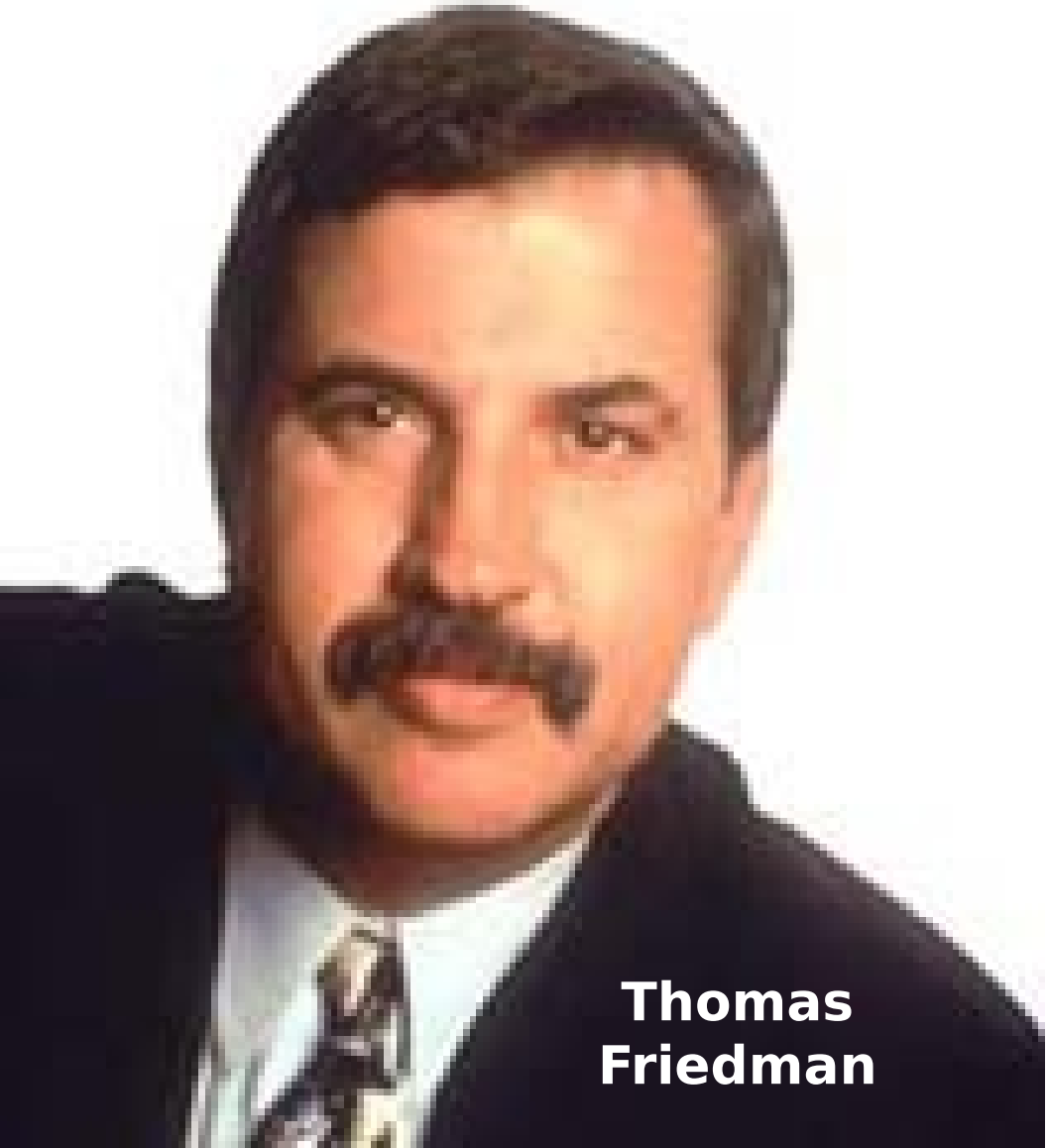
Third Image: International System

Second Image: Nation-States

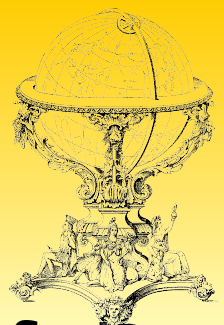
Discerning the causality of war

First Image: Human Nature

Six-Dimensional Thinking



1. **Economics**
2. **Politics**
3. **Technology**
4. **Social**
5. **Environment**
6. **Security**

	Economics	Politics	Technology	Social	Environment	Security
 System						
 State						
 Individual						

Waltz meets Friedman

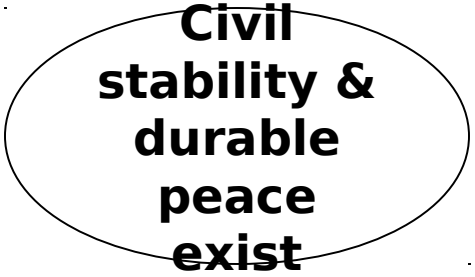
One way of filling in the scenario dynamics grid is to have participants write "best" and "worst" case "headlines" they would expect to see in a particular box.

If, for example, the topic was the global war on terrorism –

	ECONOMICS
 SYSTEM	Global Economy Collapses Under Weight of Terrorist Attacks

Influence Nets

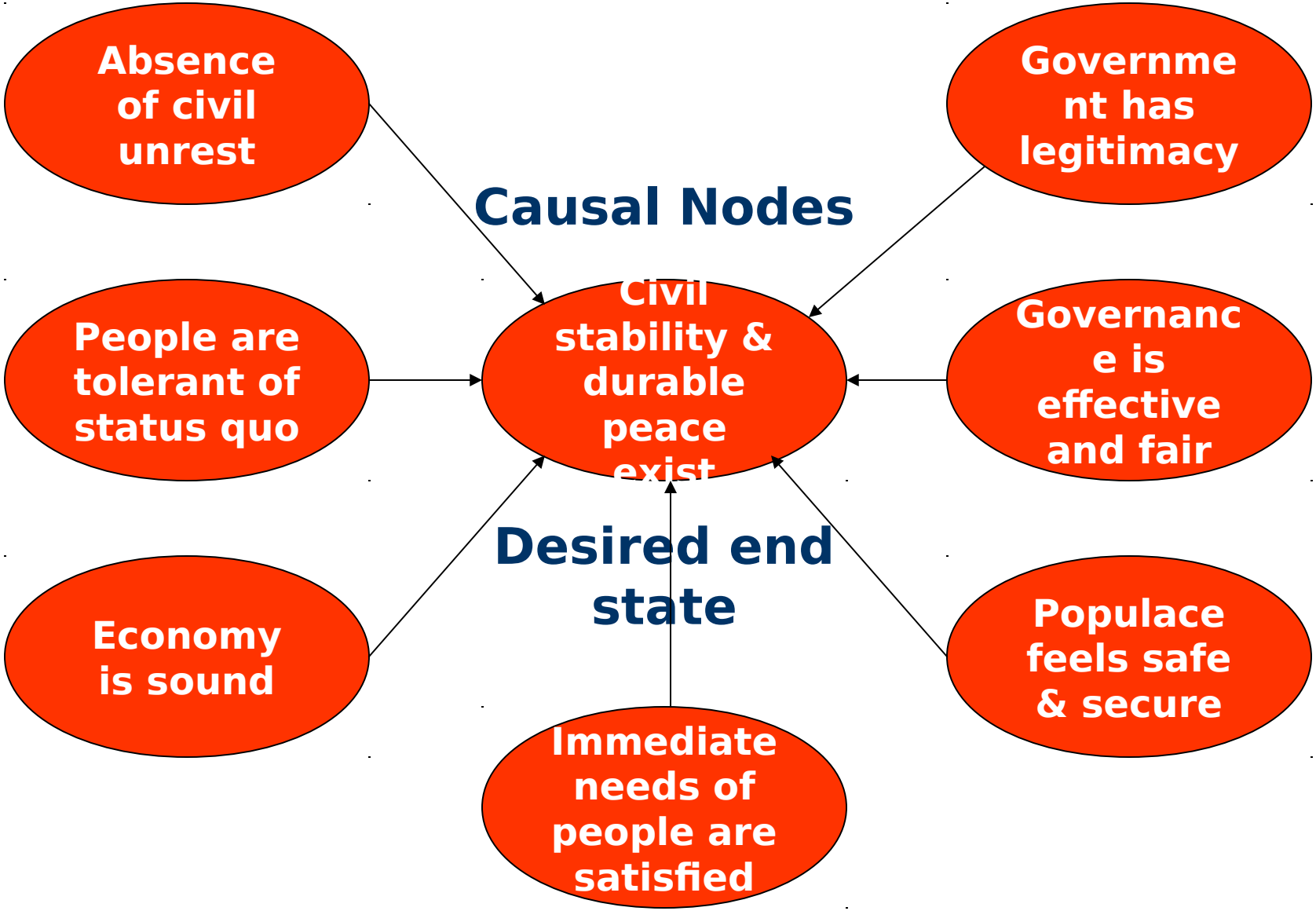
If the condition does exist, the node is blue



Desired end state

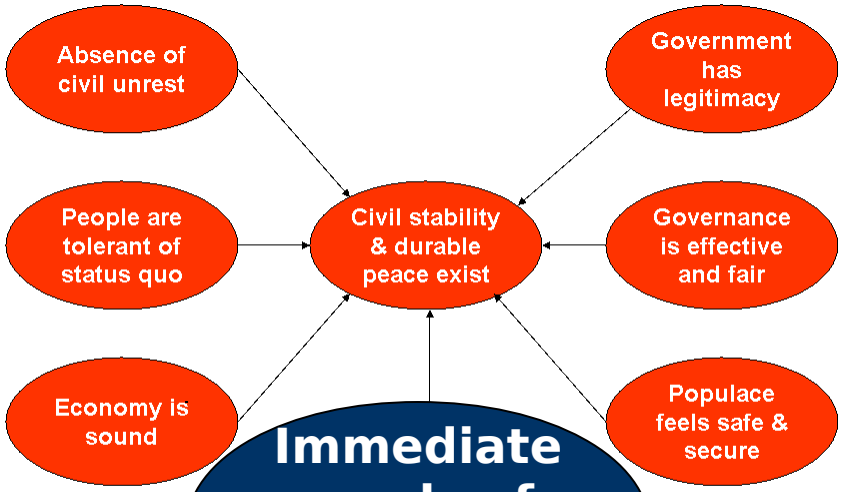
If the condition does not exist, the node is red

Influence Nets

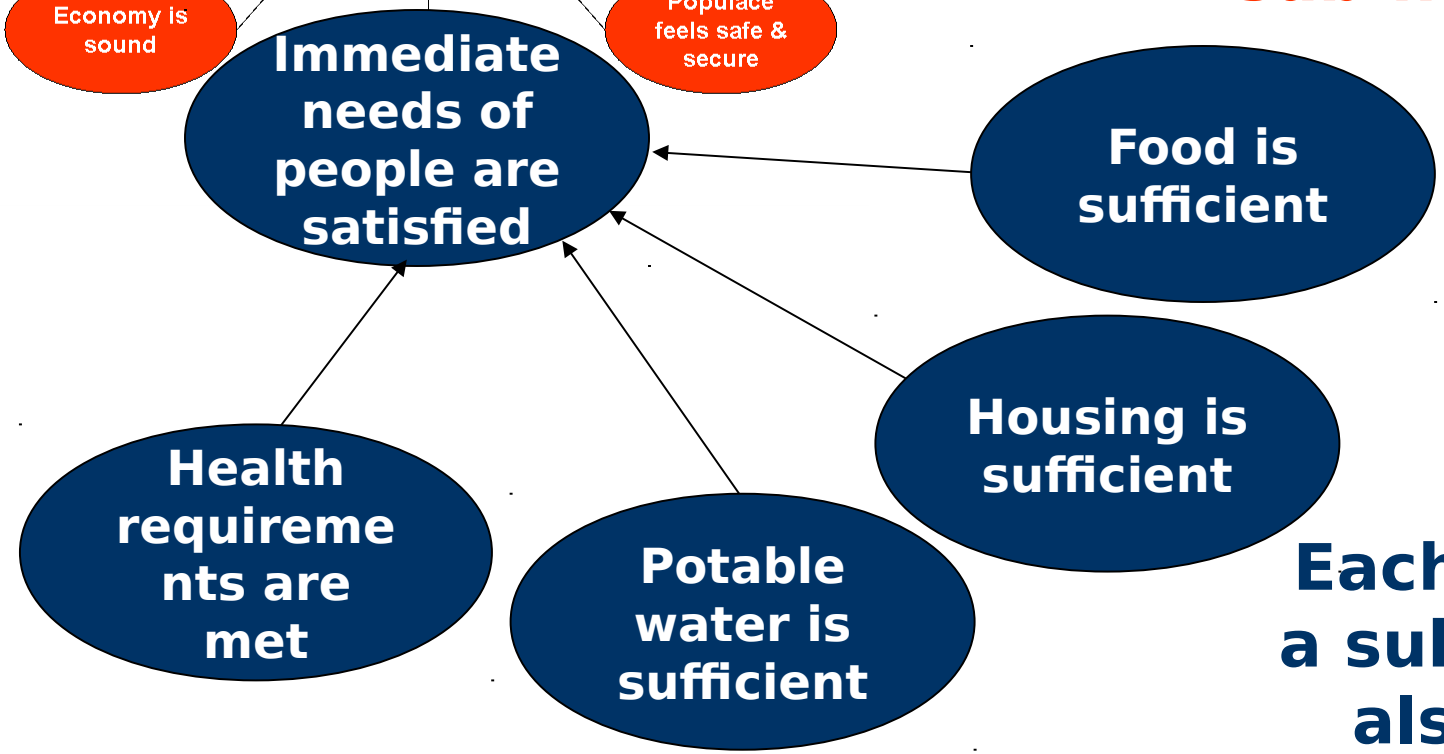


Influence Nets

Influence Nets



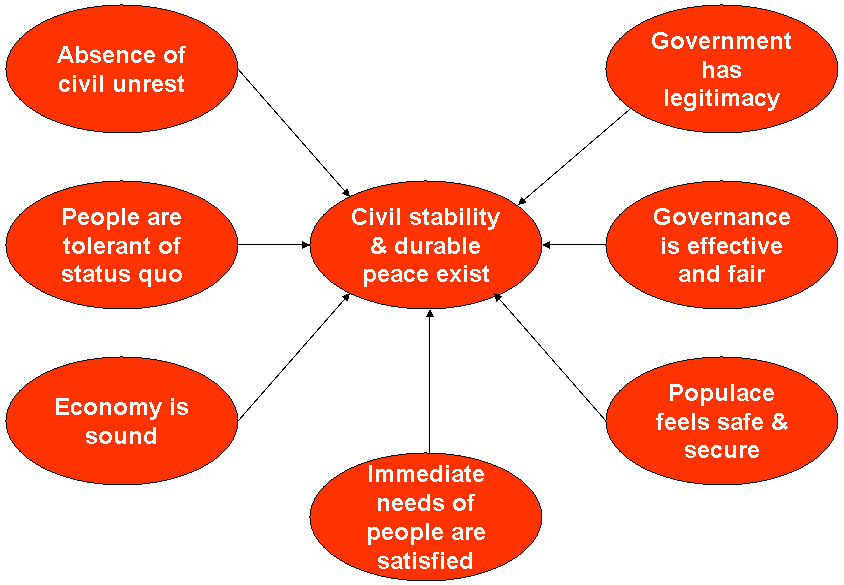
Each Causal Node represents a sub-net



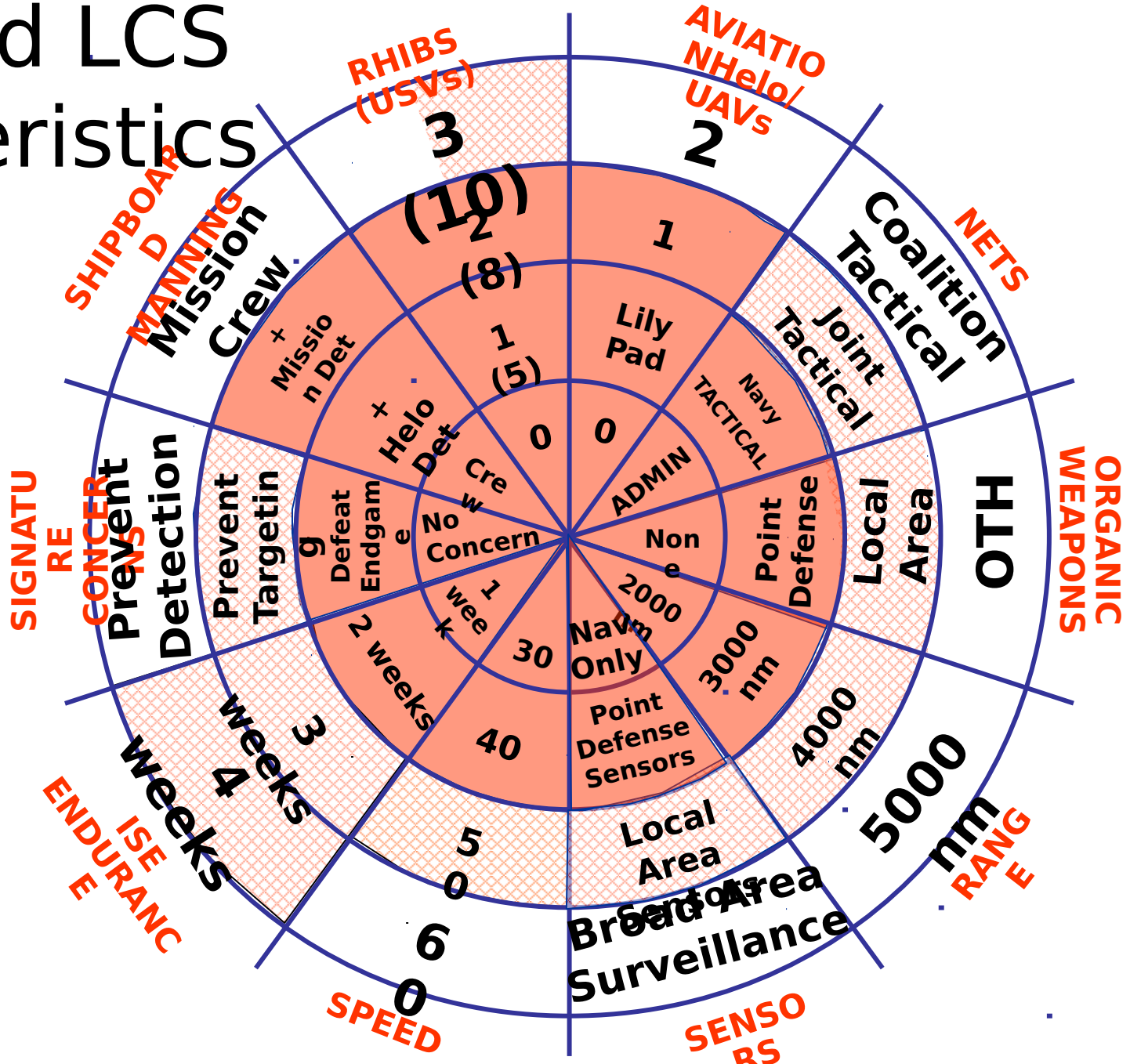
Each node in a sub-net can also have causal nodes

Value of Influence Nets

- Increases conceptualization of complex problems.
- Helps project organization.
- Provides participants with a common language and understanding
- Can provide diagnostic help for problems with available quantifiable data (original use)
- For non-engineering problems, improves cognition rather than prediction
- Useful during collaborative planning efforts.
- Excellent training aid.

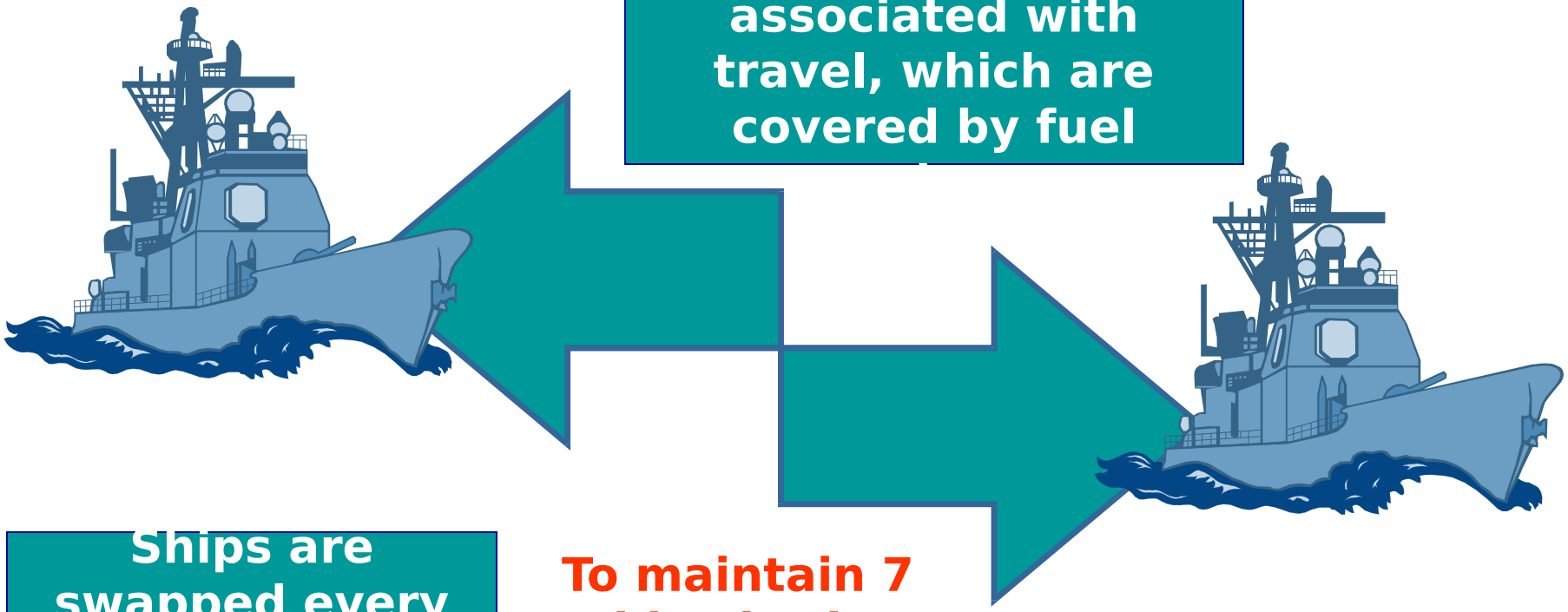


Proposed LCS Characteristics



NWC: Sea Swap

additional crews. Increased costs are associated with travel, which are covered by fuel

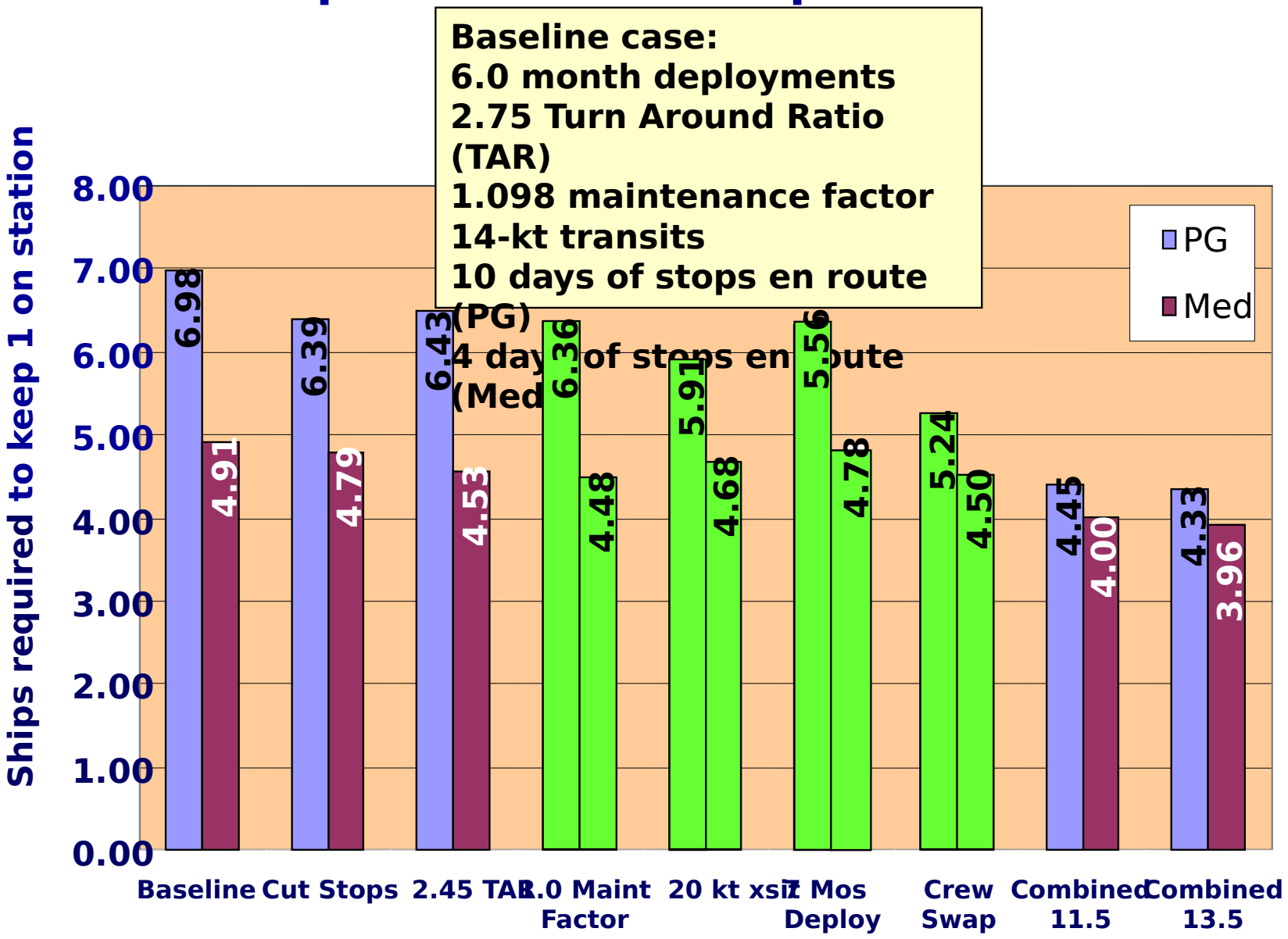


Ships are swapped every year, saving an average of one month per deployment.

To maintain 7 ships in the Gulf and 3 in the Med, 64-70 with today's policies, 52-54 with swap

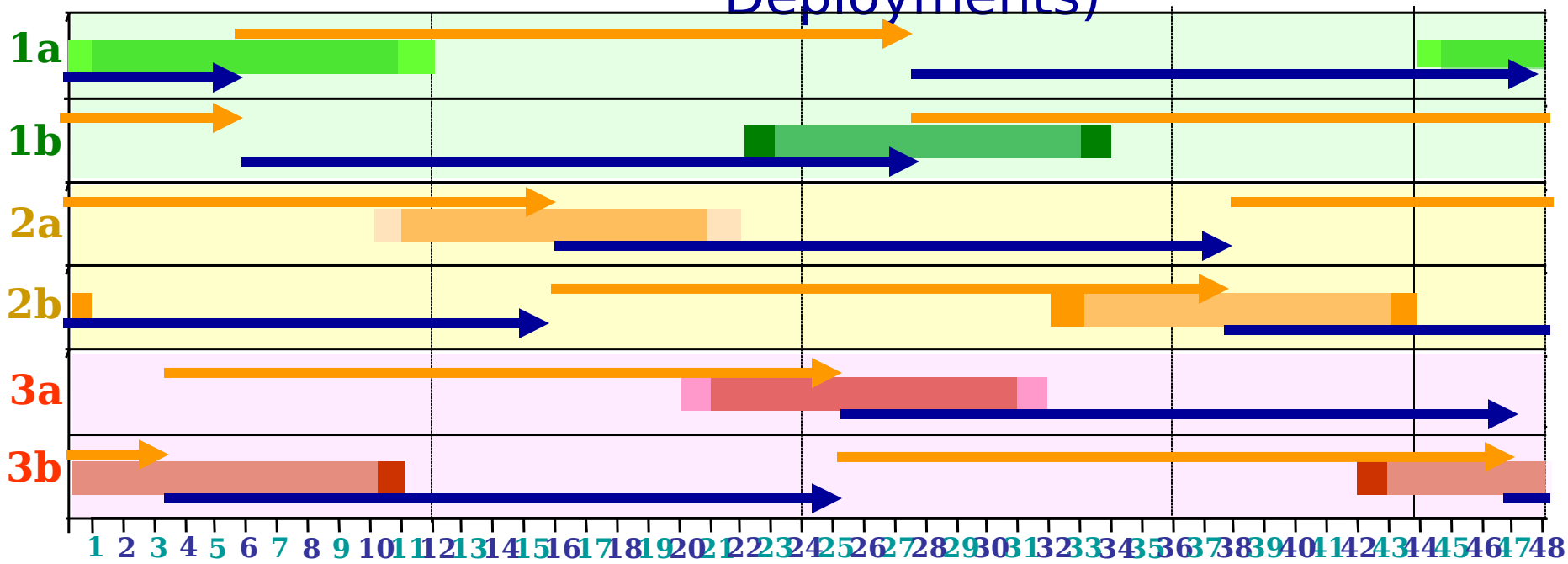
instead of "rotating" crews, this option "swaps"

Option Comparisons



Sked

(Idealized San Diego to Persian Gulf Deployments)



Turnaround ratio – Ship 2.91:1/Crew 2.75:1

Deployment time – Ship 11.5 mos/Crew 6 mos

Experiment must involve three pairs of ships and run through full 48-month cycle

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Questions